

ICNIRP Measurement Report

This report presents the results of measurements of electromagnetic field emission levels in the vicinity of mobile base stations. Results are presented as percentages of the power density reference levels for general public exposure in the 1998 edition of the Guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)¹, with figures provided for individual frequency bands used for base station (downlink) transmissions as well as an overall figure for all other frequency bands between 30 MHz to 6 GHz. The total percentage equals the sum of all individual percentages.

The power density reference levels in the ICNIRP Guidelines are the root mean square (rms) values averaged over six minutes. In this report, we have measured the average E-field strength over a six-minute period in each measurement location.

We have applied a measurement threshold of 3dB above the system noise floor² of the measurement equipment, below which any E-field strength levels measured are deemed not sufficiently above the system noise floor to be valid. In the results tables below, measurement results are shown to a precision of four decimal places. Results which are not sufficiently above the system noise floor to record as a valid measurement are shown as a dash (-). Results which are too small to register to four decimal places are shown as 0.0000%.

Date of Survey:	01/07/2026	Time Survey completed:	12:43
Survey address:	Southampton SO14		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072589	24/11/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1157	08/07/2025
Cabling	1.7m cable	2064	15/11/2024

¹ <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

² The noise floor of the measurement equipment is the level of background noise that is present before detecting any external signals. In other words, it indicates the absolute minimum level of detectable signals.

Broadcast bands covered by this report

Frequency Band	Frequency Range	Technology*
	87.5-108 MHz	FM Radio
	174-230 MHz	DAB
	470-694 MHz	Digital TV

Mobile bands covered by this report

Frequency Band	Frequency Range	Technology*
700 MHz	738-788 MHz	4G, 5G
800 MHz	791-821 MHz	4G
900 MHz	925-960 MHz	2G, 3G, 4G
1400 MHz	1452-1492 MHz	4G (Supplementary downlink)
1800 MHz	1805-1880 MHz	2G, 4G
1900 MHz	1900-1920 MHz	4G
2100 MHz	2110-2170 MHz	3G, 4G
2300 MHz	2350-2390 MHz	4G
2600 MHz TDD	2570-2620 MHz	4G
2600 MHz FDD	2620-2690 MHz	4G
3.4 GHz	3410-3680 MHz	5G, 4G
3.8 GHz	3680-4200 MHz	Various
Others**		

** This is an indication of the type of technologies typically deployed in these bands; not all frequency bands and technologies may be in use at all locations. ** All other frequencies between 30 MHz and 6 GHz.*

Survey locations

The survey was conducted within the area shown in the map below. Measurements were taken at five locations and are presented in the following pages of this report.



Location 1

Measurement time:	11:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.03605
174-230 MHz	0.00969
470-694 MHz	0.00776
700 MHz	0.00496
800 MHz	0.00940
900 MHz	0.00934
1400 MHz	0.00176
1800 MHz	0.00131
1900 MHz	0.00017
2100 MHz	0.00385
2300 MHz	0.00037
2600 MHz TDD	0.00032
2600 MHz FDD	0.00063
3.4 GHz	0.00235
3.8 GHz	0.00368
Others	0.12174
Total	0.21336

Location 2

Measurement time:	12:07
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00941
174-230 MHz	0.01082
470-694 MHz	0.00855
700 MHz	0.00896
800 MHz	0.01211
900 MHz	0.00085
1400 MHz	0.00111
1800 MHz	0.00281
1900 MHz	0.00019
2100 MHz	0.00218
2300 MHz	0.00041
2600 MHz TDD	0.00035
2600 MHz FDD	0.00090
3.4 GHz	0.00252
3.8 GHz	0.00426
Others	0.13616
Total	0.20160

Location 3

Measurement time:	12:19
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.05471
174-230 MHz	0.01193
470-694 MHz	0.00939
700 MHz	0.03562
800 MHz	0.03747
900 MHz	0.00239
1400 MHz	0.00307
1800 MHz	0.01684
1900 MHz	0.00021
2100 MHz	0.02060
2300 MHz	0.00046
2600 MHz TDD	0.00040
2600 MHz FDD	0.00319
3.4 GHz	0.00468
3.8 GHz	0.00498
Others	0.15253
Total	0.35848

Location 4

Measurement time:	12:28
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02054
174-230 MHz	0.01256
470-694 MHz	0.00970
700 MHz	0.01936
800 MHz	0.01844
900 MHz	0.00286
1400 MHz	0.00136
1800 MHz	0.00579
1900 MHz	0.00022
2100 MHz	0.00364
2300 MHz	0.00048
2600 MHz TDD	0.00042
2600 MHz FDD	0.00104
3.4 GHz	0.00262
3.8 GHz	0.00515
Others	0.16031
Total	0.26448

Location 5

Measurement time:	12:37
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01792
174-230 MHz	0.01290
470-694 MHz	0.01003
700 MHz	0.00297
800 MHz	0.00631
900 MHz	0.00735
1400 MHz	0.00119
1800 MHz	0.00357
1900 MHz	0.00023
2100 MHz	0.00353
2300 MHz	0.00050
2600 MHz TDD	0.00043
2600 MHz FDD	0.00070
3.4 GHz	0.00307
3.8 GHz	0.00521
Others	0.16548
Total	0.24140

Disclaimer: The results detailed in this report apply only to the tests made at the reported time, using the test equipment detailed. They do not indicate that on another date an identical set of results would be achieved, due to changes in local environmental conditions or other factors which may or may not have an effect on the measurement results obtained at that future time.